

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/24151

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : B01D 53/02; B 23P 19/04

US CL : 29/402.08; 96/130

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 29/402.08; 96/130, 151, 115

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4,584,001 A (DECHENE) 22 April 1986 (22.04.1986), See entire patent.	1-7
A	US 4,509,959 A (McCOMBS) 09 April 1985 (09.04.1989), See entire patent.	
A	US 4,373,938 A (McCOMBS) 15 February 1983 (15.02.1983), See entire patent.	
A	US 5,549,736 A (COFFIELD et al.) 27 August 1996 (27.08.1996), See entire patent.	
A	US 4,545,790 A (MILLER et al.) 08 October 1985 (08.10.1985), See Figure 1.	
A	US 4,378,982 A (McCOMBS) 05 April 1983 (05.04.1983), See Figures 1-3.	
A	US 5,827,358 A (KULISH et al.) 27 October 1998 (27.10.1998), See Figures 1 and 2.	

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

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"P" document published prior to the international filing date but later than the priority date claimed

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&" document member of the same patent family

Date of the actual completion of the international search

09 December 2004 (09.12.2004)

Date of mailing of the international search report

29 DEC 2004

Name and mailing address of the ISA/US

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